

**Appln No. 10/726,330**  
**Amdt date June 21, 2007**  
**Reply to Office action of May 1, 2007**

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 - 4. (Canceled)

5. (Currently Amended) An optical receiver comprising:

an optical divider to divide a signal light from an optical transmission line into two portions;

a first and a second dispersion compensators, each dispersion compensator having variable dispersion compensation to compensate chromatic dispersions of each of the two portions of signal light output from the optical divider;

a data demodulator to demodulate a data carried by a signal light output from the first dispersion compensator;

an optical autocorrelator to operate [[of]] on a signal light output from the second dispersion compensator; and

a controller to control the second dispersion compensator to increase autocorrelation of the optical autocorrelator, and to control the first dispersion compensator according to result of controlling the second dispersion compensator.

6. (Previously Presented) The optical receiver of claim 5 wherein the data demodulator comprises a transmission error rate information calculator to calculate information indicating a transmission error rate of the optical transmission line; and wherein the controller controls the first dispersion compensator to decrease the transmission error rate according to an output from the transmission error rate information calculator.

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7. (Previously presented) The optical receiver of claim 6 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and wherein the controller controls the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.

8. (Currently Amended) An optical receiver comprising:

a first optical divider to divide a signal light input from an optical transmission line into two portions;

a first and a second dispersion ~~compensator~~ compensators, each dispersion compensator having variable dispersion compensation to compensate chromatic dispersion of each portion of signal light output from the first optical divider;

a second optical divider to divide an output light from the first dispersion compensator into two portions;

a data demodulator to demodulate a data carried by ~~one-a~~ a ~~first~~ portion of signal light output from the second optical divider;

an optical autocorrelator;

an optical selector to select an output light from the second dispersion compensator, or ~~the-other~~ a ~~second~~ portion of output light from the second optical divider, and to supply the selected output light to the optical autocorrelator; and

a controller to control the second dispersion compensator to increase autocorrelation of the optical autocorrelator ~~on-condition that~~ when the optical selector is controlled to supply the output signal light from the second dispersion compensator to the optical autocorrelator, and to control the first dispersion compensator according to result of the control of the second dispersion compensator.

9. (Currently Amended) The optical receiver of claim 8 wherein the controller controls the first dispersion compensator to increase autocorrelation of the optical autocorrelator

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~~on condition that when~~ the optical selector is controlled to supply an output signal light from the first dispersion compensator to the optical autocorrelator.

10. (Currently Amended) The optical receiver of claim 8 wherein  
the data demodulator comprises a transmission error rate information calculator to calculate information indicating a transmission error rate of the optical transmission line; and  
wherein

the controller controls the first dispersion compensator to decrease the transmission error rate according to an output from the transmission error rate information calculator.

11. (Currently Amended) The optical receiver of claim 10 wherein  
the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and wherein  
the controller controls the dispersion/dispersion slope compensator to decrease the transmission error rate.

12 - 15. (Canceled)

16. (Previously Presented) A method for controlling a first dispersion compensator to compensate chromatic dispersion of a signal light input from an optical transmission line, the method comprising:

providing a second dispersion compensator having variable dispersion compensation to compensate chromatic dispersion of a signal light input from the optical transmission line;

operating autocorrelation of a signal light output from the second dispersion compensator;

controlling the second dispersion compensator to increase the autocorrelation; and

controlling the first dispersion compensator according to result from said controlling the second dispersion compensator.

17. (Currently Amended) The method of claim 16 further comprising calculating information indicating a transmission error rate of the optical transmission line out of a signal light output from the first dispersion compensator wherein; and

~~the controlling further comprises~~ controlling the first dispersion compensator to decrease transmission error rate.

18. (Currently Amended) The method of claim 17 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and wherein

the controlling controls the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.

19. - 20. (Canceled).

21. (Currently Amended) The method of claim 16 further comprising operating autocorrelation of an output signal light from the first dispersion compensator after ~~the setting and~~ controlling the first dispersion compensator to increase the autocorrelation.

22. (Currently Amended) The method of claim 16 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and ~~the controlling comprises~~ further comprising controlling the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.